

# All Agency Project Request

2009 - 2011 Biennium

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|-------------------------|---------------------------|----------------------------|-----------------------------|
| <b><u>Agency</u></b>    | <b><u>Institution</u></b> | <b><u>Building No.</u></b> | <b><u>Building Name</u></b> |
| University of Wisconsin | La Crosse                 | 285-0E-0058                | HEALTH SCIENCE CENTER       |

|                           |       |                             |                                      |
|---------------------------|-------|-----------------------------|--------------------------------------|
| <b><u>Project No.</u></b> | 09E2K | <b><u>Project Title</u></b> | Health Sci Ctr HVAC/Anatomy Lab Renv |
|---------------------------|-------|-----------------------------|--------------------------------------|

## **Project Intent**

This project creates an independent HVAC system for the Anatomy Laboratory suite to provide adequate ventilation and odor evacuation (caused by chemical preservatives), cooling, and humidity control to maintain the integrity of multiple human cadavers, which are used and stored in the instructional laboratory.

## **Project Description**

This project constructs an independent variable volume air handling system for the Anatomy Laboratory and Program Materials Room. The new air handling unit, AHU-3A, will work in conjunction with air handling unit AHU-3, utilizing its supply air and additional outdoor air to supply adequate air for cooling and ventilation. The new unit will contain an independent cooling system and a VAV box will be installed to maintain constant air flow from AHU-3. An exhaust fan with variable frequency drive will be installed to maintain a negative pressure in the rooms and an exhaust hood will be installed in the Program Materials Room.

Project work includes installation and renovation of the distribution ductwork, reheat coils, perforated face ceiling supply diffusers, and low wall mounted exhaust grilles. The DDC controls will be connected to the campus energy management system capable of temperature, humidity, pressure, and occupied/unoccupied control. These modifications will allow the Anatomy Laboratory and Program Materials Room to be cooled totally independent from the rest of the building, and will also allow cooling of the spaces when the campus chilled water plant is not operating.

## **Project Justification**

The Anatomy Laboratory serves the Physician Assistant, Physical Therapy, Occupational Therapy, and Nurse Anesthesia Graduate programs in the College of Science and Health. The room was originally designed as a cadaver lab, and it typically contains 13 cadavers and accommodates as many as 70 students in one lab session.

The laboratory suite is not getting the required amount of design supply air, or the design amount of exhaust air. As a result, odors from chemicals used for preservation of the cadavers linger in the rooms, creating a hazardous situation for students and faculty. These chemicals are objectionable when they linger at low levels, and are considered to be toxic when at higher levels. The laboratory suite is cooled by the central campus chilled water system. However, during periods when central chilled water is not available, the lab often needs cooling. Although as much outside air as possible is used to cool the rooms during these times, it is not adequate, especially in the early spring and late fall. During the peak cooling demand times when chilled water is available, it is often problematic to provide sufficient cooling and dehumidification for the preservation of the cadavers. As a result, the lab has been plagued with severe mold and bacteria growth on the cadavers. Faculty in the academic programs that oversee the lab indicate that once mold gets established on cadaver tissue it can be extremely aggressive and completely cover the cadaver in a matter of days. Also, once mold gets established, as is occurring frequently, the slightest agitation of the body can release millions of mold spores into the air, creating a significant health hazard.

The cadavers are supplied by UW Medical School, and those administering the program have indicated that UW-La Crosse is in danger of losing its ability to receive cadavers unless they are able to control the mold problem. The UW Medical School has reviewed the operational procedures used for handling of the cadavers, and they support the belief that mold problems are caused by the inability to continuously control the temperature and humidity in the lab space.

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## A/E Consultant Requirements

☐ A/E Selection Required?

Bloom Engineers & Associates, LLC has already been selected and is under contract.

## Commissioning

☒ Level 1

☐ Level 2

## Project Budget

|                     |     |                  |
|---------------------|-----|------------------|
| Construction Cost:  |     | \$233,000        |
| Haz Mats:           |     | \$0              |
| Construction Total: |     | \$233,000        |
| Contingency:        | 15% | \$35,700         |
| A/E Design Fees:    | 8%  | \$18,600         |
| DFD Mgmt Fees:      | 4%  | \$10,700         |
| Equipment/Other:    |     | \$0              |
|                     |     | <b>\$298,000</b> |

## Funding Source

|   |                  |
|---|------------------|
| GFSB - Facilities Maintenance & Renovation [Z060] | \$298,000        |
| PRSB - []   | \$0              |
| Agency/Institution Cash []                        | \$0              |
| Gifts   | \$0              |
| Grants  | \$0              |
| Building Trust Funds [BTF]                        | \$0              |
| Other Funding Source                              | \$0              |
|   | <b>\$298,000</b> |

## Project Schedule

SBC Approval: 04/2010  
A/E Selection: 06/2009  
Bid Opening: 09/2010  
Construction Start: 10/2010  
Substantial Completion: 04/2011  
Project Close Out: 07/2011

## Project Contact

Contact Name: Matthew N. Lewis, P.E.  
Email: <lewis.matt@uwlax.edu>  
Telephone No.: (608) 785-8019 x

## Project Scope Consideration Checklist

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1. Will the building or area impacted by the project be occupied during construction? If yes, explain how the occupants will be accommodated during construction. ☒ ☐

All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities. Classes will be held in the lab at various intervals throughout the project duration. However, a significant portion of the work will occur outside of the lab itself. Occupancy of the lab will be coordinated around the times that work needs to occur in the lab ceiling space.

2. Is the project an extension of another authorized project? If so, provide the project #... ☐ ☒

3. Are hazardous materials involved? If yes, what materials are involved and how will they be handled? ☐ ☒

Hazardous materials abatement is not anticipated on this project. Comprehensive building survey inventory data is not available on Wisconsin's Asbestos & Lead Management System (WALMS)  
<<http://walms.doa.state.wi.us/>>.

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4. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent? ☒ ☐

There may be temporary interruptions of power when the new HVAC system is connected to the building electrical system, but these are anticipated to be of very short duration and will be scheduled for times of low building occupancy.

5. Will the project impact on the utility capacities supplying the building? If yes, to what extent? ☐ ☒

6. Will the project impact the heating plant or the primary electrical system supplying the campus or institution? If yes, to what extent? ☐ ☒

7. Have you identified the WEPA designation of the project...Type I, Type II, or Type III? ☒ ☐  
Type III.

8. Is the project affected by historic status? ☐ ☒

9. Are there any other issues affecting the cost or status of this project? ☐ ☒

10. Will the construction work be limited to a particular season or window of opportunity? If yes, explain the limitations and provide proposed solution. ☒ ☐

The project should not result in significant disturbance in the building. The intent is to complete the construction prior to the 2011 cooling season.